From: Anisa Divine
Sent: Thursday, June 17, 2004 6:00 PM
To: Dabbs, Paul
Cc: Sumi, David; Lisa Beutler
Subject: Chapter 11. Colorado River Hydrologic Region
Importance: High

Dear Paul and David,

All of my comments are at the level of heartburn. Mainly, they are to bring this narrative up to 2004, with inclusion of the QSA or corrections of fact based on IID data or discussion with CVWD. There are, of course, some merely editorial changes in my edited draft. These are discretional and stylistic, of course.

Attached are files containing my comments (Volume 3 Comments…doc), my marked-up version of the Co River Regional Report (Volume3_oRiver_Edited Draft.doc), and the copy of the report from which I was working (Regional Report - Colorado River…doc).

If you have any questions, please see me at the Bulletin 160 meeting on June 24, or call me in my office at IID on June 28 or later.

Anisa Divine, Ph.D., Senior Planner
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From Anisa Divine, IID
6/17/04

Comments from Anisa Divine, IID - To the best of my ability, page numbers refer to June 2, 2004 file with changes accepted

General Comments

I am much happier with this version of this write-up. The following needs to be addressed:

Reading Volume 1 answered my question about the Colorado River Hydrologic Region write-up. Since the title of the Water Plan is ***California Water Plan Update 2004***, the write up for the Colorado Region must be written to indicate that the QSA has been finalized and to include the specific information about the QSA. All statements such as that below from page 10 need to be changed. I have included some specific suggestions on the next page of this document.

Page 3: Table 11-3 -- needs addition at end on QSA, and needs a Table [11-4] that describes the QSA (see following pages under Specifics, for suggestions)

Page 8, Challenges -- living within the QSA - reducing use in the IID service area from an additional 36.5 KAFY in 2003 to a high of 565.2 KAF in 2017 to an on-going 380.2 KAFY fro 2026 through 2077 - added to this are the 110 KAFY for the IID/MWD project. Over the same period, CVWD will be increasing it's Colorado River water use from 330 KAFY to 424 KAFY then an on-going 421 KAFY from hears 2048-2077. At the same time transfers out of the region to MWD will be 110+200+67.7 for IID; and 26+20 to MWD for CVWD. Accounted for in this is mitigation water for the Salton Sea for years 2003 through 2017 by IID, and restoration water for the Sea for years 2008 through 2017 by MWD. These can be found years and values can be found in Exhibit B of the Colorado River Water Deliver Agreement: Federal Quantification Settlement Agreement/ October 10, 2003 (see web link below). In addition to all of this CVWD, IID, and MWD have agreed to Extraordinary Conservation from 2004 to 2011. These terms are provided on Exhibit C of the above-cited QSA, signed October 10, 200. be

RE Page 15 – The Relationship with other Regions and Looking to the Future sections (along with any earlier sections that refer to this topic) need to be written as a positive case. Nothing is being "worked through." There is a signed agreement. The Colorado River Board isn't "preparing a draft proposal." The document cited, which I have seen, will describe California's use of Colorado River water and the new agreements.

- For details of the QSA, see the signed agreement: *Colorado River Water Delivery Agreement: Federal QSA, signed Gale Norton, DOI, dated October 10, 2003 at* http://www.iid.com/water/qsa2003/qsa_agreement_fed.pdf

- Other pertinent agreements can be seen at http://www.iid.com/water/transfer.html

- To illustrate the need for revisions in Chapter 11 Colorado River Hydrologic Region, I see highlights in this bit from page 10:

"During 2002 and 2003, the California Colorado River water agencies, working through the Colorado River Board of California, have been developing a proposal for discussion with the other basin states to illustrate how, over time, California would reduce its use to the basic apportionment of 4.4 maf/yr. A draft of the proposal, prepared by the Colorado River Board is entitled "California's Colorado River Water Use Plan" (Water Use Plan), has been shared with the other six basin states. The last official draft of the document was May 11, 2000. Efforts are currently underway to update the document.

"As currently formulated, the Water Use Plan would be implemented in two phases…."

The authors should check the rest of the Colorado River Hydrologic Region write up for any other areas that need to be updated for current conditions under the QSA.

From Anisa Divine, IID
6/17/04

Specific Comments

Page 1

Setting – 2nd Paragraph: "Elevations in the region mostly range…:

- Please mention here that elevations also drop to more than 200 feet below sea level in the Imperial and Coachella valleys.

Land Use – 2nd Paragraph: "… reservations in the Region coming under some kind of preservation or managed status."

- Unclear – are all of these under preservation status, or just the Indian reservations?

Page 2

Paragraph 6: "The cattle industry in the Imperial Valley…"

- Please revise this paragraph to reflect the latest statistics:

From ***Imperial County 2002 Agricultural Crop & Livestock Report***

Commodity	Year	Harvested Acreage (includes double cropping	Value ($)
Vegetable & Melon Crops	**2003**	**94,602**	**442,928,000**
	2002	**86,905**	**442928000**
	2001	**89,252**	**403,404,000**
Field Crops	**2003**	**376,292**	**244,526,000**
	2002	**398,772**	**272,901,000**
	2001	**398,365**	**284,901,000**
Livestock	**2003**		**303,002,000**
	2002		**282546000**
	2001		**243207000**
Other	**2003**	**71,227**	**47,605,000**
	2002	**73,433**	**57,789,000**
	2001	**71,270**	**41,625.000**
TOTAL	**2003**	**542,000**	**1,073,473,000**
	2002	**562,649**	**1,224,109,000**
	2001	**558,887**	**1,010321,000**

Page 4 **–**Table 11-2 Key Elements of Law of the River

- Update for QSA , I suggest adding language such as the following

Colorado River Water Delivery Agreement: Federal Quantification Settlement Agreement.	2003	Quantifies Colorado River Priority 1-3 apportionment among Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), The Metropolitan Water District of Southern California (MWDSC) to meet California's 4.4 maf basic apportionment.

From Anisa Divine, IID
6/17/04

Page 5 - Table 11-3 –

- Update for QSA, suggested revisions are in yellow (one typo)

Annual Apportionment of Use of Colorado River Water
(amounts represent consumptive use)

Interstate/International		
Upper Basin States (Wyoming, Utah, Colorado, New Mexico, small portion of Arizona)		7.5 maf
Lower Basin States (Arizona, Nevada, California)		7.5 maf
	Arizona	2.8 maf
	Nevada	0.3 maf
	California	4.4 maf
Republic of Mexico [a]		1.5 maf
a. Plus 200 taf of surplus water, when available. Water delivered to Mexico must meet specified salinity requirements. During an extraordinary drought, Mexico shares **portionally** with uses in the United States. proportionately or proportionally		
Intrastate (Seven Party Agreement) [b]		
Priority 1	Palo Verde Irrigation District (based on area of 104,500 acres).	
Priority 2	Lands in California within USBR's Yuma Project (not to exceed 25,000 acres).	
Priority 3	Imperial Irrigation District and lands served from the All American Canal in Imperial and Coachella Valleys, and Palo Verde Irrigation District for use on 16,000 acres in the Lower Palo Verde Mesa.	
Priorities 1 through 3 collectively are not to exceed 3.85 maf/yr. **There is no specified division of that amount among the three priorities.** Particulars of this division are specified in the 2003 Quantification Settlement Agreement (see Table 11-x).		
Priority 4	Metropolitan Water District of Southern California (MWDSC) for coastal plain of Southern California--550,000 af/yr.	
Priority 5	An additional 550,000 af/yr to MWDSC, and 112,000 af/yr for the City and County of San Diego [c].	
Priority 6	Imperial Irrigation District and lands served from the All-American Canal in Imperial and Coachella Valleys, and Palo Verde Irrigation District for use on 16,000 acres in the Lower Palo Verde Mesa, for a total not to exceed 300,000 af/yr.	
Total of Priorities 1 through 6 is 5.362 maf/yr.		
Priority 7	All remaining water available for use in California, for agricultural use in California's Colorado River Basin.	
b. Indian tribes and miscellaneous present perfected right holders that are not identified in California's Seven Party Agreement have the right to divert up to approximately 85 taf /yr (equating to about 50 taf/yr of consumptive use) within California's 4.4 maf basic apportionment. These users are presently consumptively using approximately 32 taf/yr (assuming about 25 taf/yr of unmeasured return flow).		
c. Subsequent to execution of the Seven Party Agreement, San Diego executed a separate agreement transferring its apportionment to MWDSC.		

- Priorities 5, 6 & 7 – somewhat alter, in surplus years 1st to MWD…- Check with MWD for these details.

- Update for QSA - add a table as follows to give particulars of QSA

Table 11-x Quantification Settlement Agreement for Priorities 1- 3
Use of Colorado River Water by California Agencies
(taf, amounts represent consumptive use)

	Priority 3 Quantification	Approved Net Consumptive Use in 2003	Approved Net Consumptive Use by 2030

Priority 1,2, and 3b – Based on historical average use; deliveries above this amount in a given year will be deducted from MWD's diversion (order) for the next year; as agreed by MWD, IID, CVWD, and Secretary of the Interior (PVID & Yuma Project are not signatories)	420.0	420.0	420.0
Imperial Irrigation District	3,100.0	2972.2	2607.8
Coachella Valley Water District	330	347.0	424.0
Total Priority 1-3 Use	385.0	3745.0	3466.3
Remainder of 3.85 for use by MWDSC (& SDCWA) through priority rights and transfer agreements			

Page 6

Explanations about Coachella Valley groundwater basin decline & replenishment do not match what I learned from CVWD or what I am reading in the DWR new update & in local papers. See comment below.

Paragraph 3 – "In the Coachella Valley, groundwater levels have been declining since 1945."

- Robert Robinson, CVWD, told me that groundwater levels started declining in 1928, and that, since 1948, water supplies started arriving through the Coachella Canal.

Paragraph 4 – "These supplies helped accelerate the place of replenishment of the basin…"

- The following does not support the statement in Paragraph 4: **Desert Sun** newspaper posted the following on its website on June 8, 2004

Water basin not replenishing fast enough - Posted: 3:43 p.m. The basin from where Indio, Coachella and some large farms in the east valley pump water is depleting at a rate faster than it's (sic) being replenished. If that trend continues, the water's reliability could be at stake and development in the valley could cease said a Coachella Valley Water District official.

The water district wants help in trying to replenish the basin and plans to impose a fee of $4.86 per acre foot of water on its large users to help pay back $9.5 million to build two recharge ponds that would percolate water back into the Lower Whitewater River Subbasin.

The fee will cost the city of Indio $93,970 extra this upcoming fiscal year and will essentially be passed on to its residents at about $1 a month per household.

Page 6

Paragraph 2 – "In 2000, the applied demands for agriculture in the Imperial Valley were 2,911 taf."

- IID records are as follows (note – 2.887 is the amount measured on the AAC at Pilot Knob, which is not even in IID's service area – which means that IID applied ag demands could not have been 2,911 taf. In 2003 the PK value was 2.936 maf).

	DELIVERED to Divisions	**DELIVERED to Users**
2000	2,710,047	2,694,448
2001	2,696,193	2,679,788
2002	2,755,264	2,734,634
2003	2,557,851	2,540,491

Source: IID AAC data

From Anisa Divine, IID
6/17/04

Page 8
Paragraph 4 – "PVID, in conjunction with the University of California Cooperative Extension and DWR, has installed three CIMIS stations"

- Please revise to indicate that IID also has 3 CIMIS stations under the same type of agreement & delivery. CVWD has these as well.

Page 9
Next to last Paragraph – "Most of the environmental water demands in the region are for the Sonny Bono Salton Sea National Wildlife Refuge, DFG Imperial Wildlife Area, and wetland areas on the shore of the Salton Sea."

- Add statement re mitigation water until 2017 for the IID/SDCWA transfer approved under the QSA – see QSA webpage, Appendix B for details.

State of the region

Page 10
Box – Salton Sea Ecosystem – "The amount of freshwater inflow that will be available to the Sea is considered uncertain due to water transfers within the United States and water conservation both in the United States and in Mexico."

- The amount of freshwater inflow from IID is fixed through 2017 – refer to QSA webpage, Exhibit B.
- Mention that Sea is below sea level at about minus 225 feet.

Under the **Challenges** section,

- Include a statement regarding requirements for living under stricture of QSA. Under the QSA, IID and the farmers that it serves farmers will have to conserve an additional 465.2 taf by 2017, reducing to 392.2 taf by 2026 and remaining at that level through 2047. In addition, IID, CVWD and MWD will have to payback overruns for Calendar Years 2001 and 2002 in the amounts of 18,900 af, 9,200 af, and 11,000 af, respectively, through extraordinary conservation measures. See QSA webpage, Exhibits B and C.

- Also CVWD will be living with around 424 taf per year, not the 500 that it anticipated needed – this in the face of rising population levels.

Page 13
Table 11-5 - 1988

- All linear move systems were removed, maintenance support from the manufacturer was not available locally.
- Under QSA extends to 2077

Table 11-5 – 1998 IID/SDCWA

- Agreement was signed in 1998, but could not act on until QSA was signed. In 2003, through fallowing, IID transferred 10 taf to SDCWA, with 5 taf mitigation water to Sea. Will continue through 2017 at which time 100 taf will go to SDCWA and 50 taf to Sea. That is, under the QSA, 1/3 of water made available through fallowing goes to Salton Sea as mitigation water; 2/3 going to SDCWA as water transfer. See QSA webpage, Exhibit B.
- Action : Water transfer agreement; only land fallowing through 2017; then conservation
- Estimated Savings In 2003, 10 taf/yr, with 5 taf to Salton Sea; increases to 100 taf to SDCWA & 50 to Salton Sea in 2017 By 2022, increases to 200 taf/yr . remains at that level through 2047 (and through 2077, if extended)

From Anisa Divine, IID
6/17/04

Relationship with other Regions

- Pages 14 & 15 – See my general comments on page 1 of this write up.

Page 14
Paragraph 2

- Include pertinent information about QSA in here. Some information about negotiations might be good. I will attach the DRAFT version a paper that a colleague and I will be presenting at the USCID meeting October 2004.

Looking to the Future

Page 14
Paragraph 2

- See my comments on page 1 of this write up. Update with QSA info instead of speculation.

Page 16
Key Elements of QSA box

- Indicate that DWR/author has edited the AP material.

Water Portfolios for Water Years 1998, 2000, and 2001

Page 17
Paragraph 1 -

- Note that Bulletin 160-08 1998 (wet), 2000(average), 2001 (dry) categories for entire state do not reflect conditions in this region.

Page 18
Sources of Information

- Add sources for QSA material – websites provided on page one of this document, or other sources that DWR/author finds.